

Chapter 4

Engineer Recon Team and Obstacle Reconnaissance

As discussed in Chapter 1, engineer recon elements may be a team-, a squad-, a platoon-, or another-sized element. Regardless of the size, highly trained personnel are required for obstacle recon operations conducted forward of friendly lines and having extremely limited security and evacuation assets available. Engineer training must be focused on accomplishing the specific obstacle recon mission.

The current engineer force structure does not provide for personnel (other than a recon noncommissioned officer [NCO] in the S2 section) or equipment dedicated to recon efforts. However, experience has shown that engineer units that have dedicated personnel, equipment, and planning time to the recon effort have achieved great success. Successful employment of engineers in a recon role is a result of effective SOPs and highly trained staffs and recon teams. This chapter provides leaders with the key factors required for the formation of engineer recon teams as well as the C² necessary when using engineer scouts.

PERSONNEL AND EQUIPMENT

Because an engineer battalion has limited assets to draw from, the formation of engineer recon teams can subsequently degrade the capabilities of the organization from which they are drawn. The battalion commander must understand the trade-offs between using engineer assets in a recon role versus using them in a maneuver-support role.

TRAINING

Regardless of where the personnel come from to create the engineer recon teams, units will have to dedicate a large amount of training time toward developing an effective recon team. This training includes—

- Understanding how to apply the fundamentals of recon operations (see Chapter 3).
- Operating with brigade assets and the TF scouts in a habitual relationship to develop the trust and familiarity necessary to succeed on the battlefield.
- Reporting, calling for fires, first aid, land navigation, demolitions, minefield indicators, foreign-mine recognition, dismounted-movement techniques, vehicle and equipment maintenance, heliborne insertion, resupply, extraction, and relay and retrans procedures.
- Noise, light, and litter discipline and the using NVDs and camouflage.
- Rigorous physical training to meet mission requirements.

If the battalion leaders want to develop OBSTINTEL by using engineer scouts, adequate resources must be provided to ensure success.

EQUIPMENT

As with personnel, a decision must be made as to what equipment (vehicles, communications equipment, and weapon systems) the engineer recon teams will use.

Vehicles

The most common recon vehicles used are the HMMWV or the M113A3 APC. Both vehicles have distinct advantages and disadvantages and can be used effectively by trained recon teams. The choice of vehicles must best support the teams in the environment for which they are expected to operate. Advantages of the HMMWV are that it is much more stealthy, is less maintenance intensive, and can travel in more restricted terrain than the M113A3. However, the M113A3 can carry more personnel and equipment (such as marking materials and mine detectors) and is more survivable. Both vehicles can mount a weapon system such as the MK19 or the M2 machine gun. Another option available to engineer scouts is to ride in the back of a vehicle from the supported unit. This limits the engineer recon team's flexibility and control over what recons it can conduct.

Communications Equipment

The radio configuration in a recon team's vehicle depends on the availability of radio equipment and the radio nets the recon team will operate/monitor. The recon team should have a minimum of two radios in the vehicles; each vehicle should have the necessary equipment to act as a retrans vehicle to further extend the range of the dismounted element's radio system. In addition to the vehicle-mounted radio systems, each recon team should be resourced with one manpack radio specifically designated for use by the dismounted element. Since a large amount of data is passed when reporting OBSTINTEL, an effort should be made to establish connectivity to recon teams through the use of mobile subscriber equipment (MSE) or the Enhanced Position Location Reporting System (EPLRS) (as the system is fielded).

Weapon Systems

The M2 and the MK19 machine guns are available for mounting on an M113A3. The M2 provides greater range and rate of fire while the MK19 is an area-fire weapon and may produce better effects on targets. Each recon team should also have at least one M203 and one squad automatic weapon (SAW) or M60 (as well as antiarmor weapons) available to it.

Additional Equipment

Each recon team should be supplied with night-vision capability, a GPS, a hand-held laser range finder, and a digital camera.

ENGINEER RECON TEAM

An engineer recon team is the base engineer recon element. The team normally recons one NAI or multiple NAIs within the same vicinity on the battlefield. The battalion may employ more than one recon team if multiple

NAIs need to be observed in dispersed locations. In most instances, the recon team will conduct its recon dismounted. However, the team may arrive in the vicinity of the recon objective in many ways, including dismounted or by air or ground transportation. If the team travels dismounted or is air-inserted, it should consist of at least three personnel. If the team uses an organic vehicle to arrive in the vicinity of its recon objective, it should consist of at least five personnel—three with the dismounted element and two with the team's vehicle as the mounted element.

DISMOUNTED ELEMENT

A dismounted element consists of three or more personnel and is commanded by a recon team leader. The dismounted element's mission is to locate and report all necessary information required by the supported commander according to the R&S plan. This information can be transmitted directly to the supported unit's headquarters on the appropriate net (according to the SOP or the R&S order) or relayed through the mounted element.

MOUNTED ELEMENT

A mounted element consists of at least two personnel per vehicle—the vehicle operator and an assistant recon team leader. The mounted element's mission is to maintain communication with both the dismounted element and the supported unit. The mounted element is responsible for relaying any intelligence collected by the dismounted element to the appropriate C² node and ensures that the team's vehicle is not discovered by the enemy. (All OBSTINTEL collected by a recon team is sent to the engineer battalion, if possible. A mobile subscriber radio telephone (MSRT) is normally the best method.) The mounted element's secondary mission is to be prepared to go forward and conduct the recon if the dismounted element is unsuccessful.

OBSTACLE AND RESTRICTION RECON

One of the high-frequency tasks associated with recon missions is locating and reconning obstacles and restrictions that may affect the trafficability along a route or an axis. The purpose of this recon is to determine how best to overcome the effects of the obstacle: reduction or bypass. Tasks associated with this recon may be to estimate the reduction assets necessary to reduce the obstacle, to mark the best location to reduce, or to bypass the obstacle. If the obstacle is to be bypassed, the recon team should be prepared to provide guides. Obstacles and restrictions are either existing or reinforcing. Doctrine associated with the former Soviet Union emphasizes the use of man-made obstacles to reinforce natural obstacles and restrictions to slow, impede, and canalize friendly forces. These obstacles and restrictions include the following:

- Minefields.
- Bridges.
- Log obstacles.
- AT ditches.
- Wire entanglements.
- Defiles.

- Persistent agent contamination.

Although engineer recon teams have the capability to clear or reduce small obstacles that are not covered by fire or observation, an engineer recon team's primary task is reconning tactical and protective obstacles. The recon should include supporting enemy positions and possible reduction sites. Another important task is locating and marking bypasses around obstacles and restrictions.

Detection

During recon operations, engineers must help locate and evaluate obstacles and man-made and natural restrictions to support the supported unit's movement. Detecting obstacles and restrictions begins at the operation's planning phase when the S2 and the engineer conduct the IPB. The scouts combine the S2's work with the recon conducted during the troop-leading process (normally a map recon only) to identify all possible obstacles and restrictions within their AO. A recon team plans its recon based on the orders it receives, the IPB, and its own map recon.

While assisting in a recon mission, engineers will use visual and physical means to detect mines and obstacles. They visually inspect terrain for signs of emplaced minefields and other reinforcing obstacles. They must be alert to dangerous battlefield debris such as bomblets from cluster-bomb units (CBUs) or dual-purpose, improved conventional munitions (DPICM) and other unexploded ordnances (UXOs). Minefields and other obstacles can be difficult to detect while mounted. Most obstacle detection occurs dismounted. The engineer may dismount long distances from a suspected obstacle before conducting a recon. Engineer recon teams must carefully choose their dismount point. Dismount points should be covered and concealed locations out of direct-fire range of suspected enemy locations. Characteristics of dismount points are that they—

- Afford cover and concealment.
- Are easy to defend for a short period of time.
- Are away from natural traffic flow.
- Are easy to locate.
- Are within close proximity to the objective to ease C².
- Are out of sight, sound, and direct-fire range of the objective.

The engineer recon team should look for disturbed earth, unusual or out-of-place features, surface-laid mines, tilt rods, and trip wires. Maneuver units and scouts may assist in detecting mines by using the thermal sights in their vehicles. Recon elements should conduct additional visual inspections to ensure that the true extent of the obstacle is known.

Area Security and Recon

Enemy forces will cover their obstacles with observation and fire. When scouts and engineer recon teams encounter an obstacle, they must assume the enemy can observe and engage them. The scout or engineer recon team that detects the obstacle establishes overwatch before it proceeds with the recon. The

overwatching element looks for signs of enemy forces in and around the obstacle. The element visually searches the dominant terrain on the obstacle's far side for evidence of enemy positions or ambushes. Once it confirms the enemy situation from the near side, the engineers and scouts (not in overwatch) move mounted or dismounted to find bypasses around the obstacle and to establish OPs on the far side to provide 360-degree security of the obstacle. If the scouts and engineers are unable to find a bypass, they conduct their recon from the near side under the security of the overwatch elements.

Obstacle Recon

Once security is established, scouts and engineers move dismounted to the obstacle using great caution. Trip wires and other wire may indicate that the enemy is using booby traps or command-detonated mines to prevent friendly forces from determining the—

- Obstacle's location and orientation.
- Types of mines in the minefield or the type of obstacle.
- Obstacle's length and width.
- Existence of enemy coverage, including enemy strength, equipment, and fire support.
- Equipment necessary to reduce the obstacle.

The engineer recon team reconning the obstacle prepares an obstacle report with this information and forwards the report through the established channels to the supported unit's TOC.

COA Selection

After collecting the facts, the scout platoon/engineer recon team leader analyzes the situation and the METT-T factors to select a COA. There are four COAs: bypass, obstacle reduction, support of a deliberate breach, or continuing the mission.

Bypass

A bypass is the preferred method when it offers a quick, an easy, and a tactically sound means of avoiding the obstacle. A good bypass must allow an entire force to avoid the primary obstacle without risking further exposure to enemy fires and without diverting the force from its objective. Bypassing conserves reduction assets and maintains the supported unit's momentum. If a recon team locates a bypass and the commander approves its use, the scouts and engineers must mark it according to the supported unit's tactical SOP (TACSOP) and report it to their commander. At a minimum, this report should include the grid location to the far recognition marker and information on how the obstacle is marked even if it is just to confirm that the bypass is marked according to the TACSOP. If the recon team is tasked to mark a bypass, the team must emplace markers so they are not visible to the defending enemy. Engineers and scouts may be required to provide guides for the main body, especially if the bypass is difficult to locate or visibility conditions are poor.

Bypassing is not always possible, and breaching may be the best, or only, solution (such as in the following situations):

- The obstacle is integrated into a prepared defensive position, and the only available bypass moves friendly forces into the fire sack or ambush.
- The recon mission specifically tasks the recon team to clear the original route for follow-on forces.
- The best available bypass route will not allow follow-on forces to maintain their desired rate of movement, or it diverts the force from the objective.
- Improvements to the bypass may require more time and assets than breaching the primary obstacles.

Obstacle Reduction

Reducing an obstacle significantly degrades a recon team's ability to maintain the momentum of either the recon or the follow-on forces. Obstacles within the scout and engineer's ability to reduce include small minefields, simple wire obstacles, small roadblocks, and other similar obstacles. The supported commander should make the decision to have the recon team reduce an obstacle. The commander must consider the risk to the recon team and the potential for prematurely identifying the force's route. Obstacle reduction should not be attempted if the obstacle is part of an integrated defensive position.

Support of a Breaching Operation

When a large obstacle is located and cannot be easily bypassed, the alternative is to support a breaching operation. Scouts and engineers perform additional recon tasks in support of the breaching operation. These tasks include determining the assets and time needed to reduce the obstacle and the location of the best reduction sites. Scout and engineer recon effort focuses on the following:

- Trafficable routes to the reduction site and routes from the far side leading to the objective.
- Proposed locations for positioning the support force.
- Dispersed, covered, and concealed areas near the reduction site.
- The best locations at the obstacle for reduction effort. It is imperative that the reduction plan be sent to the recon teams once the scheme of maneuver is finalized. Information such as the number of lanes required and the distance between lanes will be needed for the recon forces to conduct the necessary recon.
- Positions on both sides of the obstacle that could provide enemy observation of the reduction site.
- Trafficability and soil conditions near the reduction site. This is especially important for minefield reduction because mine-clearing blades (MCBs) will not work properly in all soil conditions. This is also important information in support of river crossings. (See FM 90-13 for further details.)
- Soil type (loam, rocky, sandy, and so forth).

- The width, depth, and bottom conditions of wet and dry gaps and fords.
- The bank's height and slope and soil stability of wet and dry gaps.
- The water velocity and direction of flow of wet gaps and fords.
- The wind direction for using smoke to obscure the enemy's vision.
- The location of the forward edge of minefields to support MICLIC and MCB use.

This information can be obtained much easier if an engineer works closely with the other recon elements, especially the TF scouts. An engineer recon team must provide timely and valuable advice when large obstacles are encountered during a mission. The information is used by all elements of the breaching operation to finalize the suppression, obscuration, security, and reduction (SOSR) plans for the breaching operation. The scouts help maintain security and may call for and adjust indirect fires, as necessary, in support of the breaching operation.

COA Recommendation/Execution

Once the scouts and engineer recon teams have determined the best COA for a situation, they execute it or recommend it to higher headquarters for approval. Generally, the recon team will execute a particular COA without specific approval if it is addressed in the OPORD received from higher headquarters or in the unit's SOP. If the situation discovered is not covered by previous guidance, the recon team determines the best COA and recommends it to the commander before execution.

Examples of Obstacles/Restrictions

The following examples illustrate the recon of obstacles and restrictions in two tactical situations. They are organized using the five-step process (detection, area security and recon, obstacle recon, COA selection, and COA recommendation/execution).

Example 1: Reconning a Restriction (Not Covered by Fire or Observation)

Detection. The recon team detects a bridge when a dismounted element observes it from an overwatch position (see Figure 4-1, page 4-8). The bridge was expected because it was also identified during the recon element's map recon. The dismounted element confirms that the bridge is there and is intact.

Area Security and Recon. The dismounted scouts and engineers bring their vehicles into covered and concealed overwatch positions; the scouts establish near-side security of the bridge. A dismounted patrol with engineers is organized and conducts recon up to the bridge while overwatched by the vehicles (see Figure 4-2, page 4-9). The dismounted element recons for both mounted and dismounted bypasses. It must determine quickly if it is possible to bypass the bridge by using a ford in the local area. The recon leader monitors the situation and may direct other elements to assume the mission of locating other bridges or fords to serve as bypasses, as necessary.

If the water obstacle can be forded, the dismounted scouts use the ford to move to the far side. On the far side, they recon the terrain that dominates the bridge. Far-side security is established on terrain where they can observe enemy approach routes to

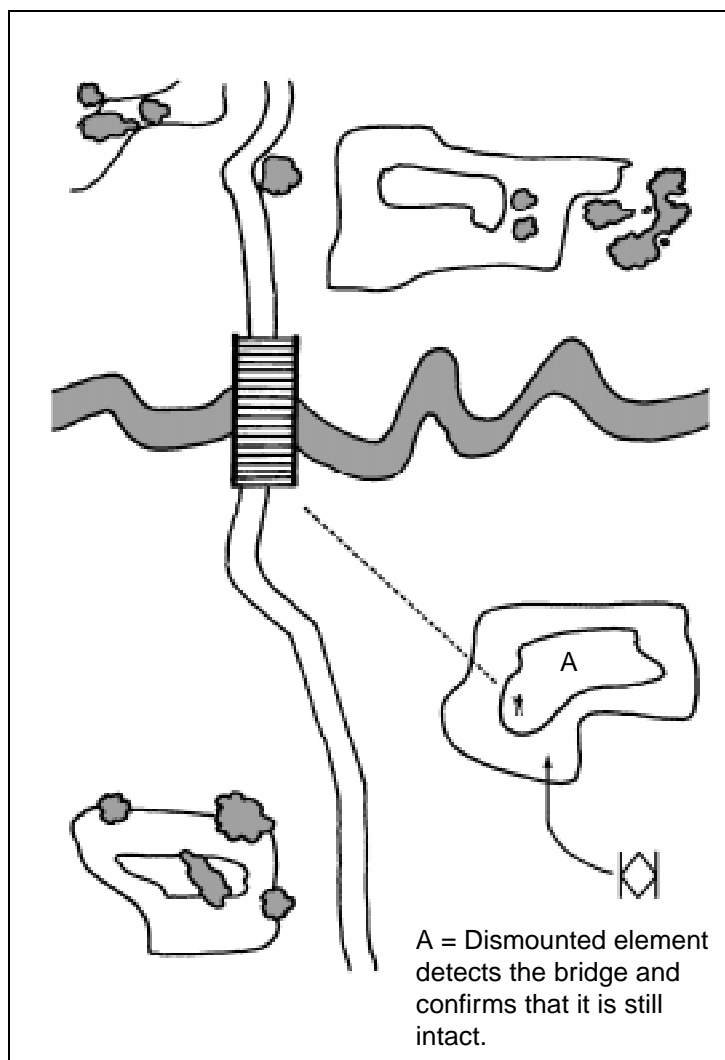


Figure 4-1. Detection

the bridge. Once the far side is secure, the scouts/engineers can recon the bridge itself.

If the water obstacle cannot be easily forded in the local area, the recon team may have to cross the bridge itself. Before crossing, the dismounted team (with engineers) visually examines the bridge for structural damage and rigged explosives and mines. If the bridge appears intact, the dismounted team crosses the bridge one scout at a time. The recon team moves to the far side quickly and takes up covered and concealed positions that provide security on the opposite approach to the bridge. Once the entire dismounted element is secure on the opposite side, it continues beyond the immediate bank area to secure the far side.

Obstacle Recon. Once the area has been reconned and secured, a dismounted scout/engineer element moves to the bridge and performs a detailed examination focusing on information needed to accomplish the mission (see Figure 4-3, page 4-10). The element examines the bridge to—

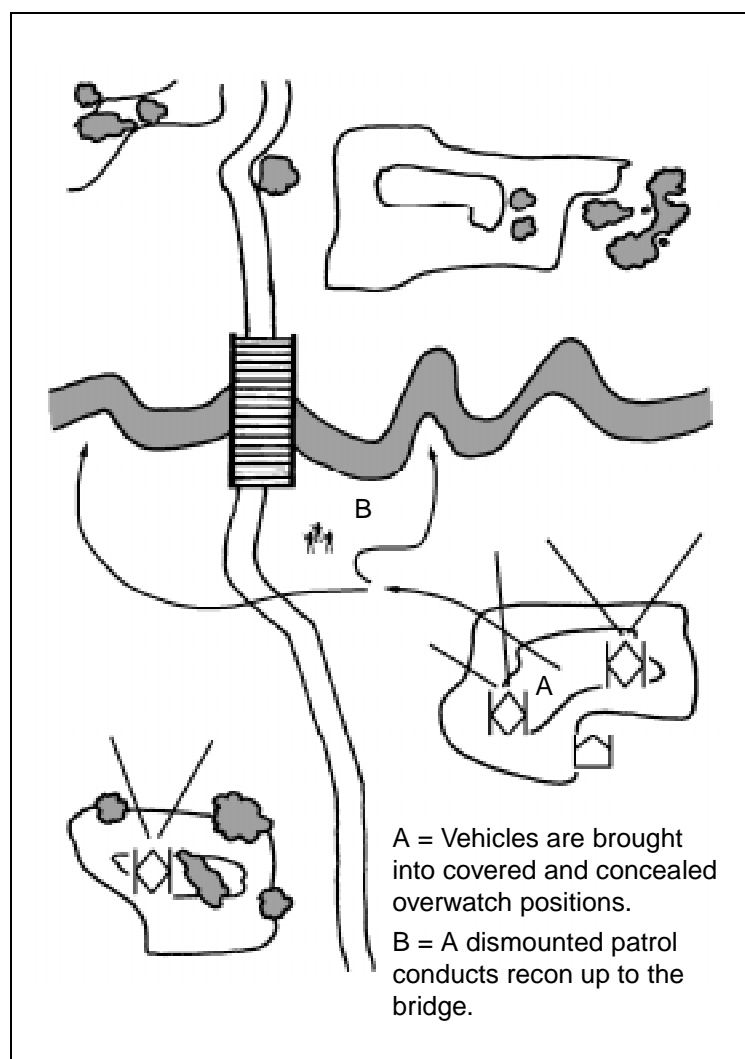


Figure 4-2. Area security and recon

- Ensure that it is clear and free of demolitions and booby traps. This requires examining underwater pilings and the underside of the bridge for hidden explosives, as well as the approaches for mines and booby traps. In addition, the element looks at the far side to find any electrical cables or wires connecting the bridge to the shore.
- Find structural damage. Scouts/engineers look for obvious signs of enemy destruction efforts as well as for less obvious signs of structural damage, including cracks or fractures in stringers or supports and twisted or untrue alignments of stringers or supports.
- Conduct a hasty bridge classification (see Appendix B) and a demolition recon when mission or orders dictate.

The recon team leader consolidates all appropriate and relevant reports (for example, the bridge, ford, and bypass reports) and relays them to higher headquarters in a timely fashion.

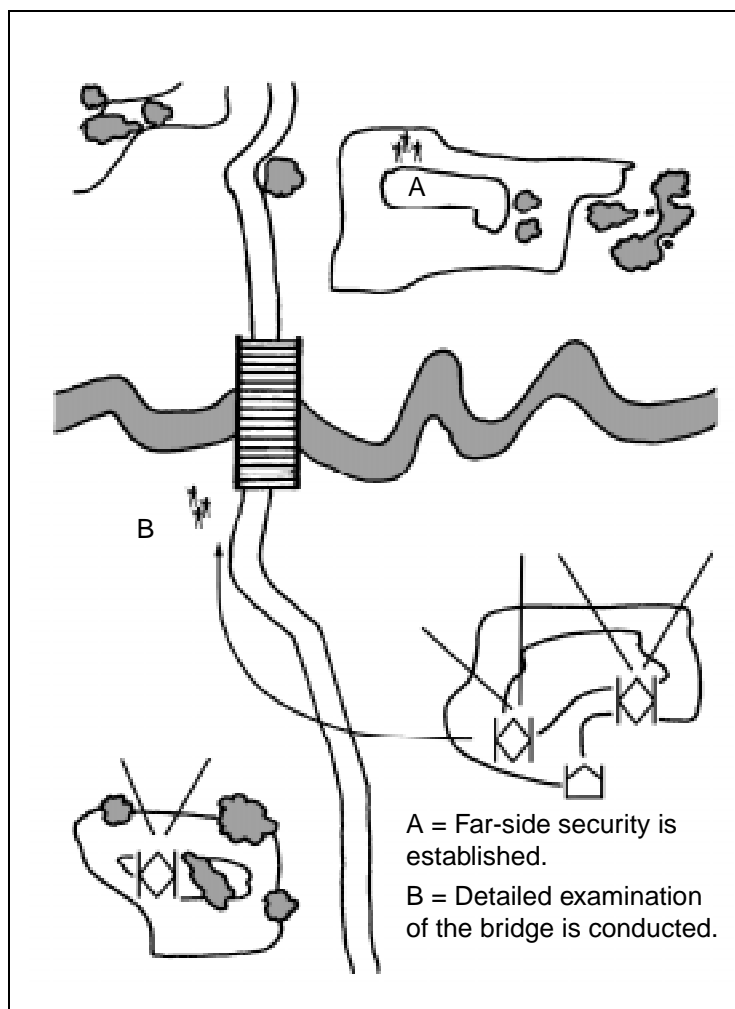


Figure 4-3. Bridge recon

COA Selection. Based on the results of the bridge recon, the team leader determines that the bridge is secure and that he can safely move the team across it and continue the mission.

COA Recommendation/Execution. In accordance with the team's SOP, the scout leader moves the remainder of his element across the bridge, overwatched by the other vehicles (see Figure 4-4). The vehicle crosses with only the driver on board. The leaders and the engineers who watch for any signs of damage or stress on the bridge observe the crossing.

Once the lead vehicle is across, it moves to link up with the dismounted element and assists in providing far-side security. At this point, the overwatch vehicles can cross the bridge, and the recon team continues its mission.

Example 2: Reconning an Obstacle (Covered by Fire)

Detection. Dismounted scouts detect an extensive wire obstacle from a covered and concealed position. From its vantage point, the team cannot determine any additional details.

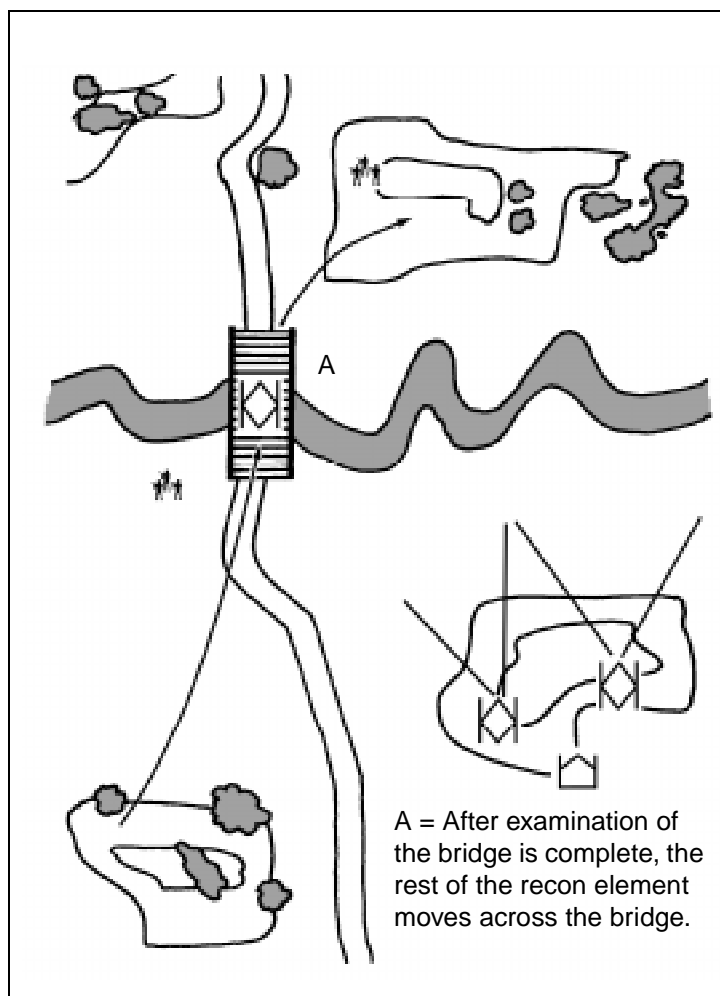


Figure 4-4. Movement of the recon element across the bridge

Area Security and Recon. The recon element (consisting of TF scouts and an engineer recon team) brings its vehicles up to covered and concealed positions to overwatch the obstacle. The team then organizes a dismounted element to locate a bypass and secure the far side. Because of the obstacle's size, the team informs the scout platoon leader that it will take considerable time to recon the obstacle. In the process of executing the patrol, the team discovers that the obstacle's left flank is tied into an impassable swamp (see Figure 4-5, page 4-12).

Based on this initial evaluation, the scout platoon leader attempts to increase the recon's speed by sending two additional scout teams and the engineer recon team to find a bypass around the obstacle's right flank and to conduct an obstacle recon. One team moves to a dismount point and sends a patrol around the right flank. The patrol is engaged by enemy machine guns and then are engaged by enemy vehicles in defensive positions. The team reports that it can maintain contact with the enemy but can no longer maneuver (see Figure 4-6). The other team finds a position where it can observe the enemy's rear; it reports a company-size element in defensive positions overwatching the obstacle. It also reports that there are no trafficable routes around the enemy's right flank (see Figure 4-7, page 4-14). The engineer recon team moves

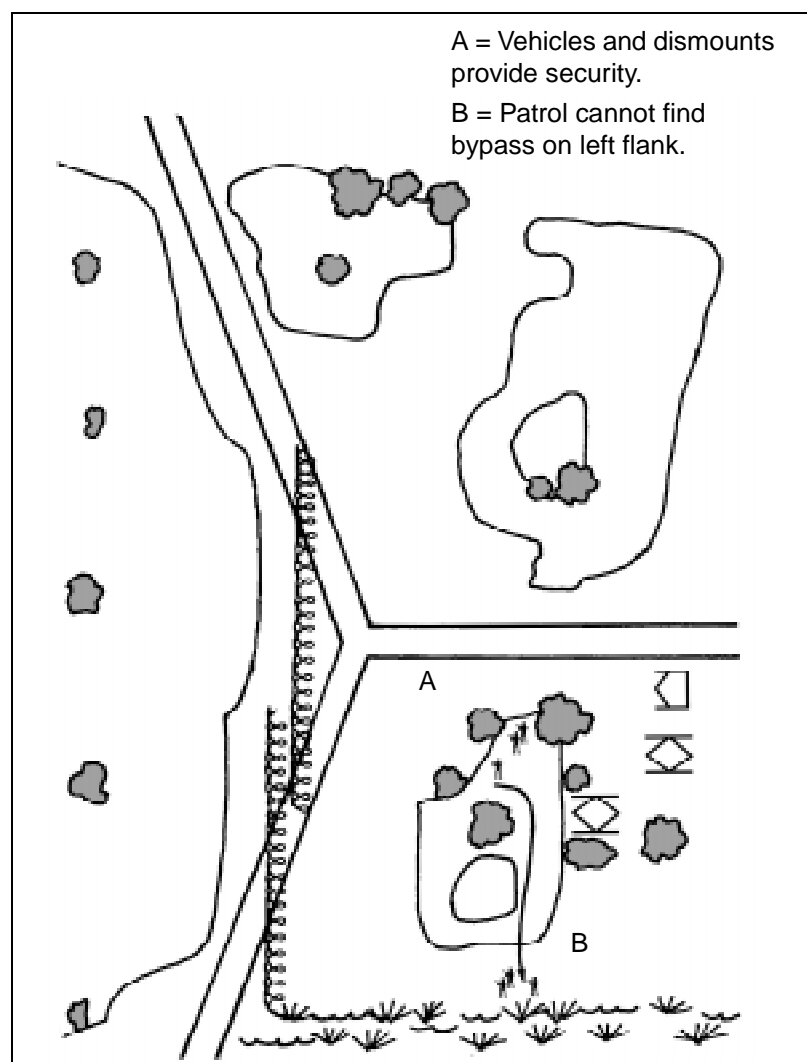


Figure 4-5. Area recon of obstacle

near the scout team that originally detected the obstacle. At this point, the platoon leader determines that he does not have the combat power to secure the objective's far side. He also determines that the only trafficable bypass is covered by enemy direct fires. He must conduct a detailed obstacle recon with the support of the engineer recon team before he can recommend a COA to his commander.

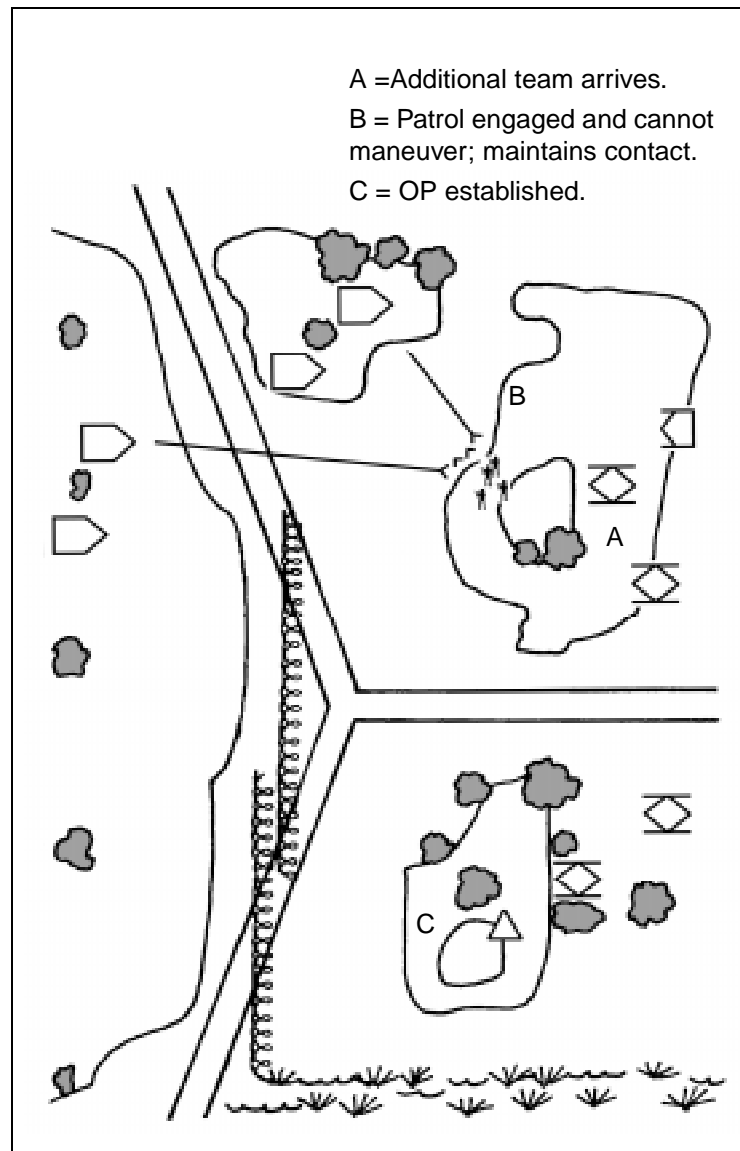


Figure 4-6. Recon of enemy obstacle

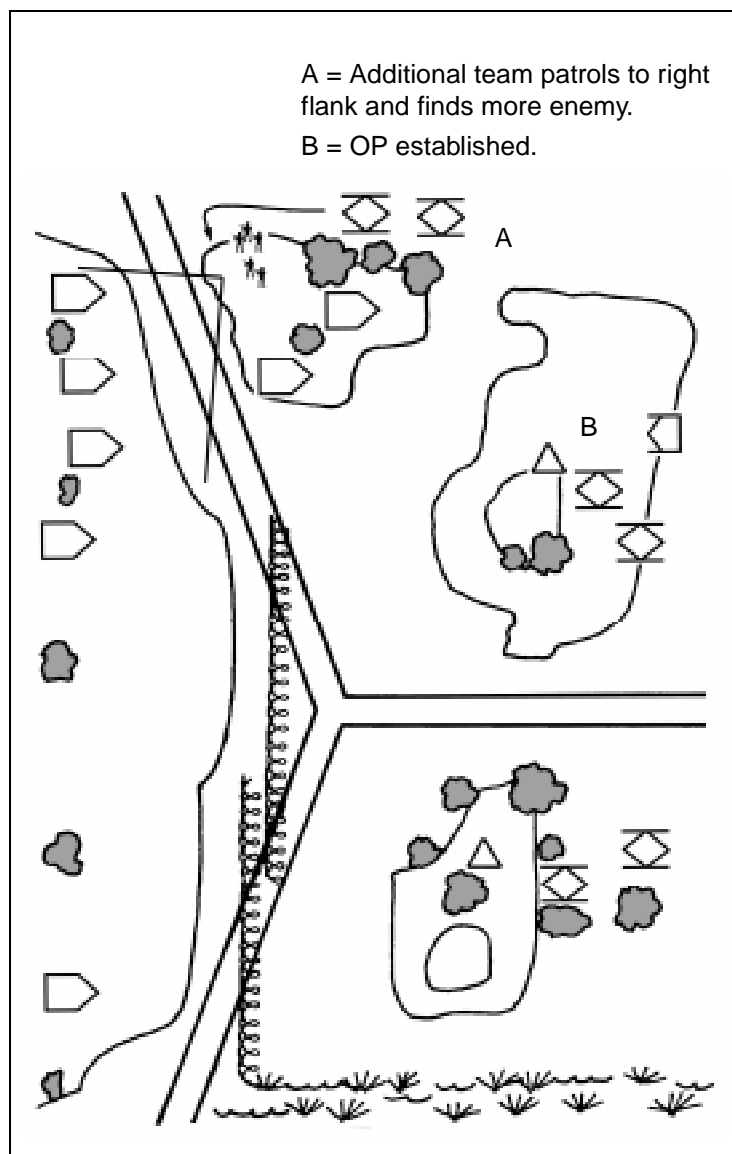


Figure 4-7. Recon to enemy's right flank

Obstacle Recon. The scout team that originally detected the obstacle is in the best position to perform the recon. This team links up with the engineers and moves dismounted to recon the obstacle. Because there is enough light for the enemy to cover the obstacle visually, the platoon leader coordinates indirect fire to support the patrol. As the patrol moves out, mortars lay suppressive fires on the known enemy positions, and artillery fires place smoke into the area between the enemy positions and the obstacle (see Figure 4-8).

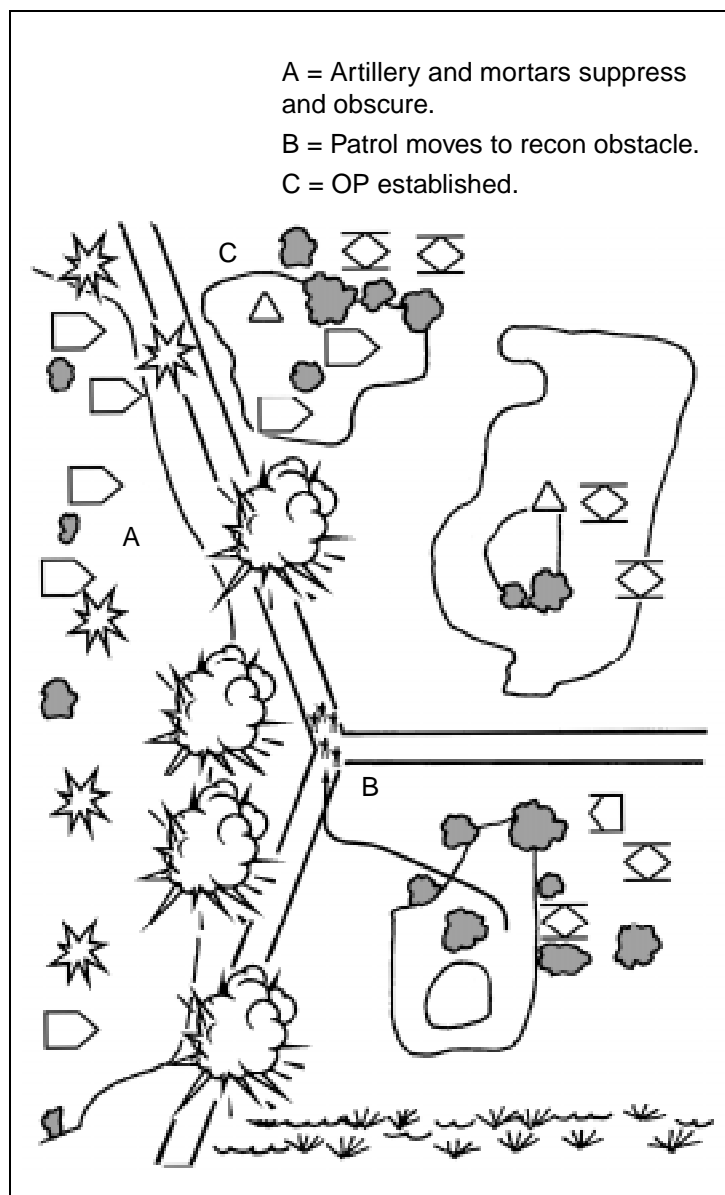


Figure 4-8. Mortar and artillery fires support obstacle recon

The scouts and engineers move by covered and concealed dismounted routes to the obstacle. Through probing, grapnel, and visual observation, they determine that the wire obstacle is oriented north to south and is reinforced with surface-laid mines. They

determine that the minefield consists of TM-62M AT mines. The mines are spaced 4.5 meters apart with two rows spaced 30 meters apart on the near side of the wire and another two rows on the far side. No AHDs are present. Once this information is acquired, the scouts/engineers move laterally along the obstacle for 200 meters to determine its length and confirm that the composition is uniform. They begin to look for the most favorable reduction site (see Figure 4-9).

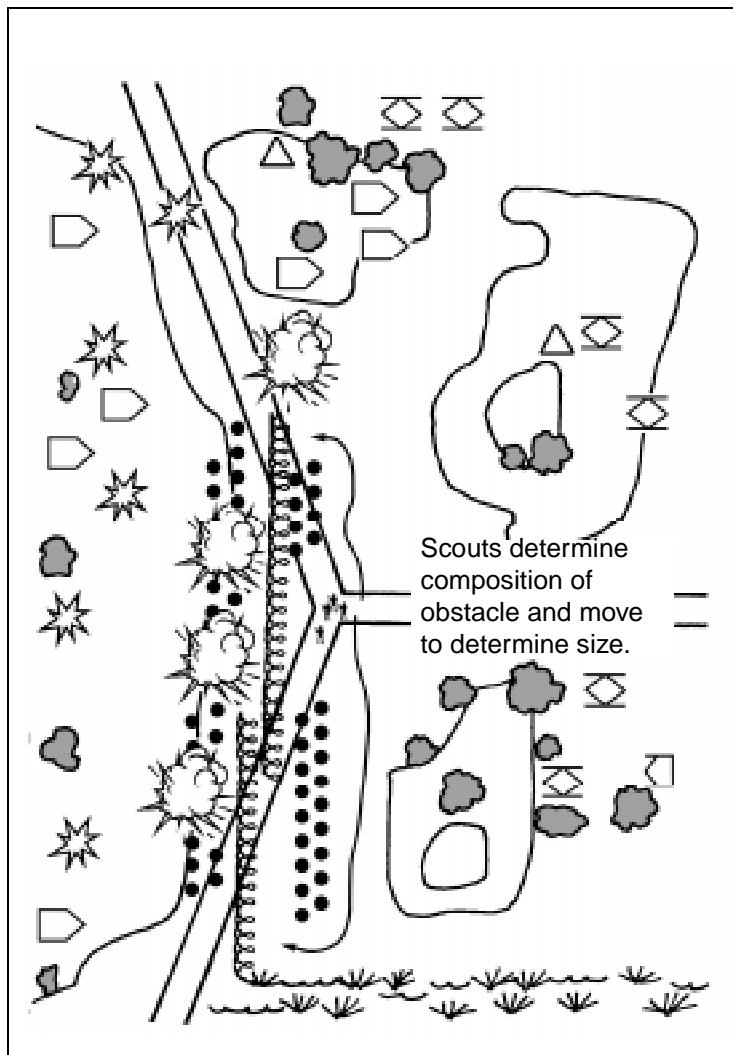


Figure 4-9. Recon of minefield/wire obstacle

COA Selection. The platoon leader evaluates the situation and determines that he cannot bypass the obstacle and does not have the internal capability to reduce it. He recommends a breaching operation.

COA Recommendation/Execution. The scout platoon leader recommends to higher headquarters that the platoon prepare to support a breaching operation. With higher headquarters' approval, he orders the platoon to recon the best location for the support force to suppress the enemy during the breaching operation. Further, he orders his scouts and the engineer recon team to recon an obscured route for the

breaching force's maneuver to the obstacle. The scout OP team continues to observe and report on enemy activity. The recon leader then begins coordination with the element responsible for conducting the breaching operation (see Figure 4-10).

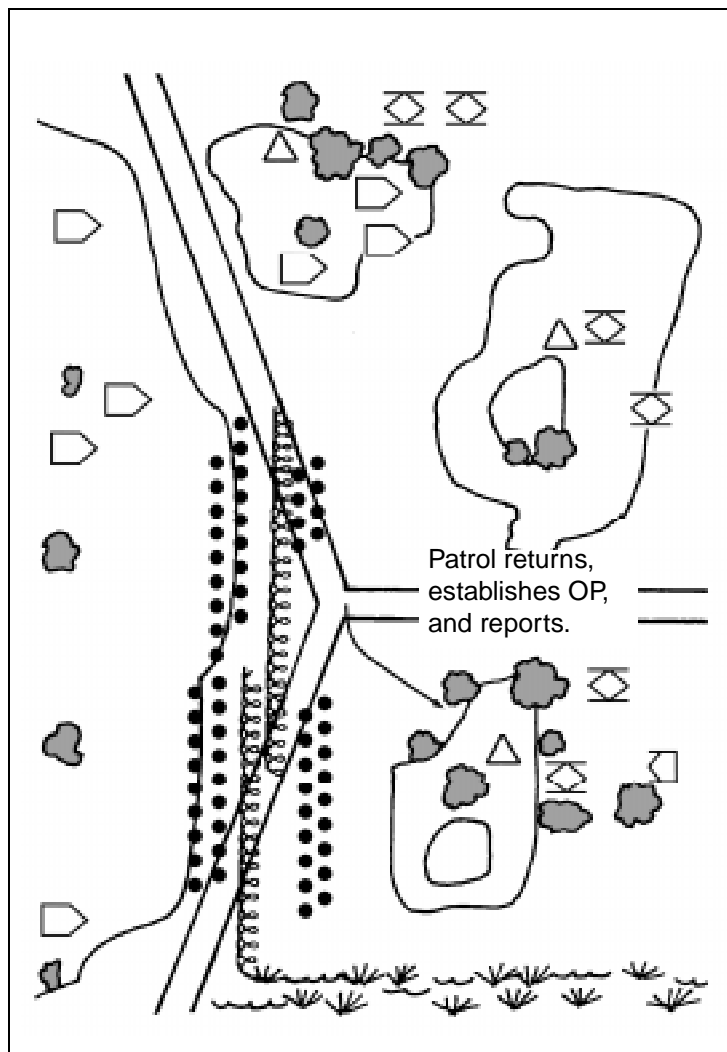


Figure 4-10. Patrol returns and establishes an OP

EMPLOYMENT CONCEPTS

An engineer recon team can be employed using several methods. Each method has advantages and disadvantages.

INTEGRATED AS PART OF THE BRIGADE INTELLIGENCE-COLLECTION EFFORT

In this method, an engineer recon team is integrated into a brigade's collection effort. This effort normally includes other assets (such as COLTs) and receives the same CS and CSS as the rest of the brigade's recon assets. It is imperative that the engineer battalion understands all aspects of the team's plan. As a minimum, the recon team leader should attend the brigade's R&S rehearsal. The battalion should track the recon team at all times. Resources (including

maintenance and personnel status, verification of the recon team's position, and activation of no-fire areas [NFAs]) must be closely monitored. The efficient dissemination of the intelligence collected by the recon team is also a critical task of the battalion staff. This employment concept may be used when—

- Engineer scouts are not expected to work close to the TF scouts.
- There are distinct advantages to moving the recon team across the LD before the TF scouts are ready to move (for example, to observe the enemy as he is emplacing his obstacles).

In the defense, the recon team may be—

- Employed to screen if the engineer battalion is required to occupy a battle position (BP) as an engineer TF.
- Positioned to overwatch a friendly emplaced scatterable minefield and to call fires as necessary.
- Positioned to overwatch NAIs where enemy scatterable minefields are templated.
- Positioned forward to identify and help target enemy engineer equipment.

ASSIGNED BRIGADE NAIs IN A TF's AO

Under this method, a recon team receives its recon objectives from a brigade through an engineer battalion. The recon team leader should link up with the appropriate TF scout platoon leader upon receiving the mission from the engineer battalion. The engineer battalion must ensure that the necessary instructions to the appropriate TFs are included in the brigade's OPORD, especially if the TFs are expected to provide logistical support to the engineer recon team (including casualty evacuation and vehicle recovery support). The team leader should be present at the scout platoon leader's OPORD and rehearsals to ensure understanding of the scout platoon's plan. To reduce the risk of fratricide, the recon team leader must provide his plan to the scout platoon leader. The recon team should report all checkpoints/locations on the same net that the TF scouts are operating on (for example, the TF operations and intelligence [O/I] net). All intelligence reports should be sent to both the TF and the engineer battalion. The battalion should then pass the information to the brigade and its subordinate elements. This employment concept should be used anytime the recon team works close to the TF scouts.

WORKING UNDER A TF's CONTROL

In this method, engineer recon teams are placed under the TF's control to look at NAIs that the brigade—

- Has tasked to the TF.
- Expects the TF to develop requiring engineer expertise (possibly a TF breaching operation).

This method involves the least amount of coordination and planning for the engineer battalion. However, the responsibility to plan and monitor the recon team's activities now falls to the TF engineer. Although the TF decides how to

use the engineer recon teams, the TF engineer must be involved in the planning details to ensure that the team is properly used, is integrated into a sound R&S plan, and receives all necessary support. The TF engineer must track the status of the recon team at all times, including—

- Reviewing maintenance and personnel statuses.
- Verifying that the recon team's position is plotted on the TF TOC's situation map (SITMAP).
- Ensuring that NFAs have been established around the recon team.
- Ensuring that any intelligence that the recon team collects is sent to the engineer TOC (in addition to the reporting requirements placed on them by the TF). The engineer TOC must forward all intelligence reports immediately to the engineer battalion.

SUPPORT CONSIDERATIONS

An engineer battalion can only provide a limited amount of logistical support to an engineer recon team, especially after it crosses the LD. For this reason it is essential that the engineer battalion understands the recon team's requirements. The engineer battalion must coordinate closely with the brigade or TF for support that the battalion cannot provide or that can be provided more timely by the maneuver units. Examples include casualty evacuation, vehicle recovery, and maintenance support (including vehicle, communications, and weapon repair). See Chapter 7 for a detailed discussion of CSS.

The following example of an engineer recon team assigned a brigade's NAI and operating in a TF's AO illustrates the use of an engineer recon team in a tactical situation.

Based on the division's SITEMP, the brigade S2 (with the assistance of the engineer battalion S2) has developed a SITEMP including templated obstacle locations. Based on this SITEMP, the brigade commander's guidance (he wants to penetrate the northern motorized rifle platoon [MRP] of the northern motorized rifle company [MRC]), and the commander's PIR, the brigade has developed one NAI (NAI 301) looking for OBSTINTEL (see Figure 4-11, page 4-20). In addition to the MRPs overwatching the obstacles, an additional threat to the engineer recon team templated on the SITEMP is an infantry platoon overwatching the obstacle on the north wall.

The engineer battalion S3 issues a five-paragraph OPORD to the recon team leader at the engineer battalion's TOC (see Appendix C). This OPORD includes a complete discussion of the enemy situation, all brigade assets that will be operating forward of the LD, specific instructions on the information that the battalion is expecting from the recon team, instructions on what nets the battalion expects the team to operate and report on, and complete information on the service-support plan for the team. For this mission, the engineer battalion has included in paragraph 3 of the brigade's OPORD (tasks to subordinate instructions) that the mechanized TF, in whose area the team will be operating, will provide security for the engineer recon team during the obstacle recon. It will also provide all logistical support to the engineer recon team (including maintenance support and casualty and vehicle evacuations). (Casualty evacuation by the TF is a backup to using aviation assets by the brigade.) Additionally, the engineer

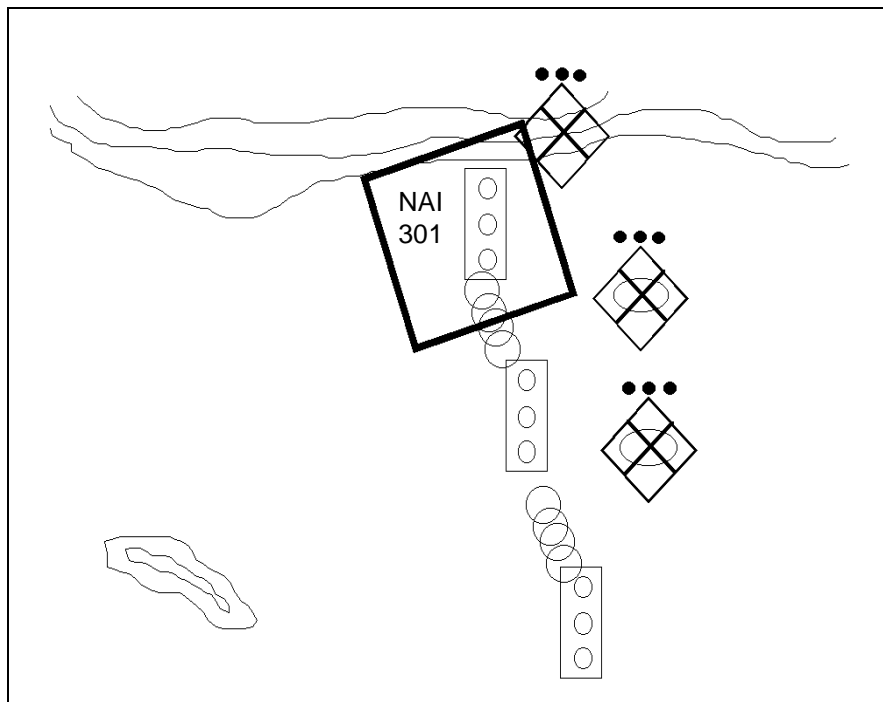


Figure 4-11. SITEMP with NAI 301

battalion XO and S4 have directly contacted their counterparts at the TF to reinforce and confirm this support requirement.

The recon team leader immediately begins moving his team to the TF's TOC where he has coordinated a link up with the TF scout platoon leader. At the TOC, the team leader ensures that the TF understands all the support elements on which the battalion briefed him and that the S3 further briefs him on exactly how that support has been planned. The team leader completes his OPORD as the assistant team leader conducts the team's precombat checks (PCCs). The leader's plan calls for the team to cross the LD (PL Pistons) at 082000 JAN 97 and travel along Route Blue to checkpoint 2, which he has designated as his dismount point. The recon team will observe the NAI throughout the day on 9 JAN 97 in an effort to observe the enemy during his obstacle emplacement. The team will link up with the TF scouts (who will provide security for the team during the obstacle recon) at checkpoint 2 after end evening nautical twilight (EENT) on 9 JAN 97. At that point, the leader plans to travel with the dismount element to the obstacle to conduct the recon. Two targets have been coordinated with the FSO in support of his mission—one in the vicinity of the dismount point and one in the vicinity of the templated obstacle. The team leader will establish rally points from the dismount point to the obstacle. In the event that the dismount element becomes separated during contact with the enemy, it will meet at the last established rally point (see Figure 4-12).

Before issuing his OPORD, the team leader will backbrief the engineer battalion commander via frequency-modulated (FM) radio and will brief the scout platoon leader on his plan. The engineer recon team will cross the LD about 24 hours before the TF scouts in an attempt to observe the enemy as he emplaces his obstacles, while the TF is still developing its R&S plan. The team leader provides the scout PSG with

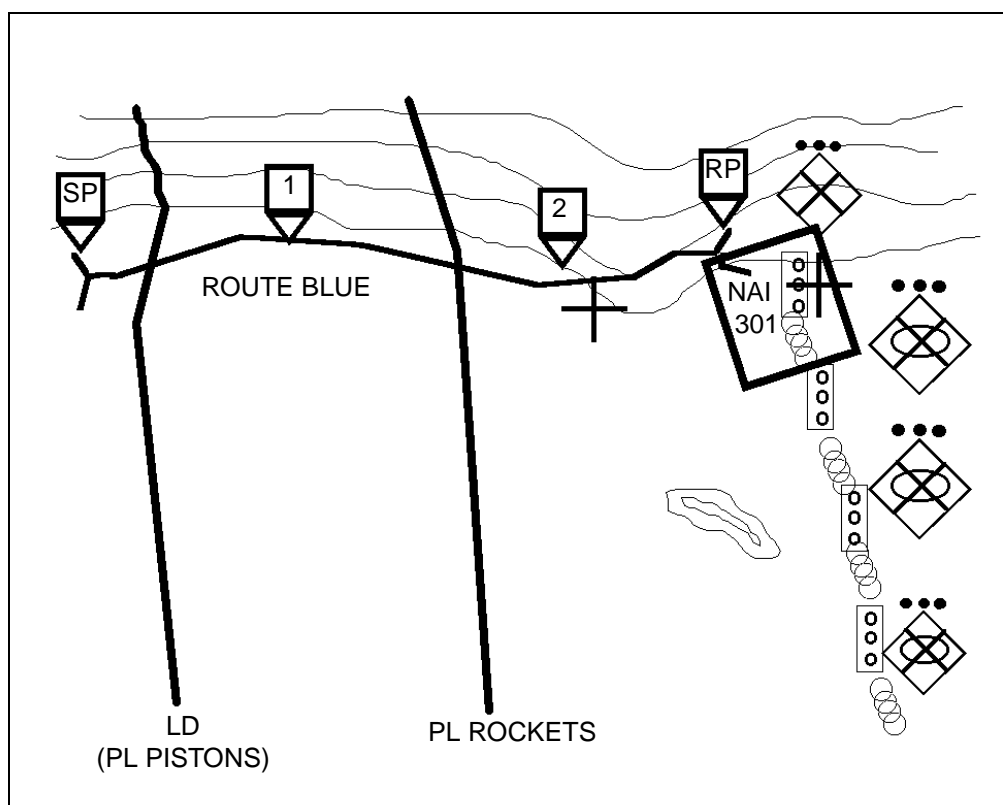


Figure 4-12. Team leader's addition to graphics

his personnel and vehicle information (because the TF plan calls for all support to the team to come through the scout platoon, including casualty evacuation). The team will use this method of evacuation if brigade aviation assets are not available.

At 082000 JAN 97, the team crosses the LD along Route Blue. This information is sent to the engineer battalion on the MSRT. The engineer battalion disseminates this information to the brigade (TF 1-23 in particular). At 0300, the team reaches its dismount point at checkpoint 2 and reports to the engineer battalion, ensuring that a NFA is established around the team's vehicle (see Figure 4-13, page 4-22). Additionally, the battalion's TOC ensures that the location of the recon team is plotted on both the engineer battalion and brigade map boards.

By 100500 JAN 97, the dismounted element has located the obstacle and, using the techniques discussed in Chapter 3, collects all of the required information about the northern minefield. The dismounted element reports all collected information on the TF scout net to the TF. The mounted element, who monitored the report to the TF, relays the same information to the engineer battalion over the MSRT. The engineer battalion passes the information to the brigade, ensures that the information is plotted on the brigade and battalion map boards, analyzes the information, and disseminates it to its subordinate elements.

Upon completion of its mission, the dismounted element returns to the team's vehicle and remains in the hide position until the attack. During the attack, the team links up with the breach force at a predetermined location and assists in guiding the breach force to the obstacle to begin its reduction effort.

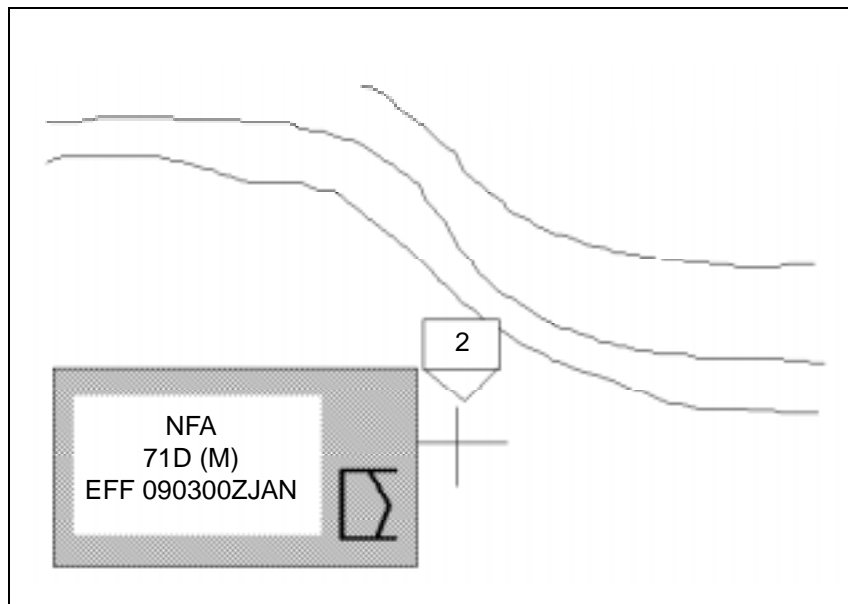


Figure 4-13. NFA established at dismount point

RESPONSIBILITIES

The following paragraphs outline the responsibilities of an engineer commander, an engineer staff, and a recon team leader:

An engineer commander—

- Ensures that the acquisition of information on enemy obstacles is one of the maneuver commander's PIR or IR.
- Understands exactly how an engineer recon team will be employed. This includes which vehicles the team will travel with or in, its routes, how its vehicles/casualties will be evacuated, the indirect-fire plan to support it, and how acquired OBSTINTEL will be reported and disseminated.
- Provides and fully supports well-trained and motivated soldiers and leaders as part of the engineer recon team.
- Develops a scheme of engineer operations (SOEO) that considers engineer recon integration into the supported unit's R&S effort.
- Recommends the appropriate command or support relationship for the recon team.

An engineer staff—

- Assists in developing NAIs to acquire OBSTINTEL for the appropriate areas of the battlefield (based on the SITEMP, current intelligence, and the commander's guidance) and provides this information to the brigade's/TF's S2.
- Ensures that the engineer recon team is tasked with the appropriate type and quantity of NAIs.

- Develops a feasible CSS plan for the team. It conducts staff coordination with the maneuver units, as required.
- Coordinates for fire support for the team.
- Issues a complete OPORD to the recon team leader. The OPORD should include instructions on what the recon team should do if communications are lost, actions if templated obstacles are not at the assigned NAI, and recon requirements for unexpected obstacles discovered en route.
- Tracks the location and activities of the recon team at all times.
- Ensures that NFAs are established around the recon team when they become stationary for an extended period of time (for example, in the team's hide position).
- Ensures that the team's location is plotted on the engineer and maneuver map board at all times.
- Tracks, analyzes, and disseminates all reported OBSTINTEL (see Figure 4-14, page 4-24).
- Refocuses the R&S plan when required.

A recon team leader—

- Accepts responsibility for all facets of the training and discipline of his men, the maintenance and operation of his equipment, and the integration of his team into the supported unit.
- Maintains communications throughout the mission and reports all information quickly and accurately.
- Ensures that the recon team conducts rehearsals and equipment preparations before each mission.

Obstacle No	Grid Coordinates	Type of Mines	How Obstacle is Marked	Unit to Clear Obstacle	DTG of Obstacle Clearance	Lane/Grid Marking	Remarks
ENA001MN01/	NK123456- NK125457	SB-MV	Single-strand concertina on all four sides	A/99 EN BN		NK124456-NK124457 Lane marked to full-lane pattern using traffic cones	Obstacle reported by A/ 1-23 IN (031500JAN97)
ENA001MN02+	NK450200- NK453202	SB-MV	Single-strand concertina on enemy side of minefield			NA	Reported by Engineer Recon Team 1 (NAI 301) (100200JAN97)
ENA001MN03X	NK189765- NK190768	SB-MV	NA	B/99 EN BN	011200JAN97	NA	
As of: <u>100600JAN97</u>							
<p>NOTE: Obstacle numbering system: ENXXXXXXXX.</p> <ul style="list-style-type: none"> • Characters 1-2: EN meaning enemy obstacle. • Characters 3-6: Alphanumeric description of the headquarters type and numerical designation that reported the obstacle. Character 3 designates the unit type: <ul style="list-style-type: none"> -A, armor division/brigade -I, infantry division/brigade -C, cavalry division -R, cavalry regiment -Z, corps • Characters 7-8: Letters indicating obstacle type (see FM 20-32). • Characters 9-10: Two numbers indicating obstacle number within the obstacle type. • Character 11: One of four characters indicating obstacle status: <ul style="list-style-type: none"> -+ obstacle reported, no clearance planned -/ clearance of obstacle planned -- clearance of obstacle in progress -X clearance of obstacle complete 							

Figure 4-14. Example of enemy obstacle-tracking chart